D&R ELECTRONICS CO. LTD.
EMERGENCY VEHICLE SOUND, LIGHTING & EQUIPMENT

The F3 Intimidator

INSTALLATION, OPERATION AND MAINTENANCE MANUALS

Model F3.3000S & F3050S

Model F3.3100S F3.3150S

Applicable Models:

F3.3000S FULL FEATURE SIREN & LIGHT CONTROL SYSTEM and SOLID STATE RELAYS

F3.3050S FULL FEATURE SIREN & LIGHT CONTROLLER WITH BUILT-IN ARROWSTIK CTRL and SOLID STATE RELAYS

F3.3100S FULL FEATURE LIGHT & SIREN CONTROL SYSTEM WITH 4 POSITION SLIDE SWITCH and SOLID STATE RELAYS

F3.3150S FULL FEATURE LIGHT & SIREN CONTROL SYSTEM W/ 4 POSITION SLIDE SWITCH & BUILT-IN ARROWSTIK CTRL and SOLID STATE RELAYS

IMPORTANT: Read ALL instructions and warnings before installing and using this unit.

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WARNING!

The D&R Electronics INTIMIDATOR siren/light controller is an advanced microprocessor based system. Unlike conventional systems, malfunctions and/or improper operation will result if proper installation procedures are not followed. Refer to any accompanying diagrams and pay particular attention to WARNINGS and CAUTIONS listed in this document. Follow instructions exactly as shown where so indicated.

1. Unpacking & Pre-Installation Check

D&R Electronics Co. advises that you open and examine all shipments within **48 hours of receipt**. The *INTIMIDATOR* is shipped pre-assembled and factory tested. All necessary hardware for standard installation is included. Remove all components from the shipping carton.

Use this pre-installation check list to verify your unit:

1. Confirm contents with the packing slip
2. Examine unit for damaged in transit (i.e. scratches, broken or bent connectors. etc). Report any damage to the carrier immediately. Keep all shipping material

The unit is factory tested and a pre-installation check is not needed.

1. UNPACKING

Before beginning any installation, unpack the equipment received. After unpacking, examine **ALL** components received for any damage that may have occurred while in transit. If any damage has occurred, file a claim **IMMEDIATELY** with the courier stating the extent of damage. Check **ALL** envelopes, packing slips, shipping labels and tags before removing or destroying them.

To ensure your satisfaction, open all cartons and report any shortages within 48 hours or receipt.

2. GENERAL DESCRIPTION

The Intimidator is a siren and light control system utilizing state-of-the-art Microprocessor based technology to provide an integrated full-featured control system for use in emergency vehicles. The system is designed to allow quick and easy installation and replacement of the electronics.
The Intimidator features built-in Head-Light Flash, Shot-Gun Timer, Master Emergency one touch button control, horn ring feature and 5-Siren Tones.
An optional arrow-stick control is also available.
The lightweight control head is remote so it can be located on the dash, in a console or
with an optional over the radio swing bracket. Included is a PA Microphone.
A slide-switch version is also available.
The F3 series comes in different models with interchangeable legends to suit your needs. These options can be quickly and easily configured at the time of installation, refer to the programming section in this manual for programming instructions. The Intimidator F3 series is pre-programmed with a default configuration (activated on power-up).

A complete listing of standard features of the Intimidator F3 is provided in the following section. .

3. STANDARD FEATURES

Master Emergency: **C**an be programmed to provide one-touch activation of essential emergency lights and other functions.

Outputs: Up to 20 outputs. Three (3) 15 AMP outputs, eleven (11) 8 AMP outputs, two (2) speaker outputs.

Siren Tones: Standard siren tones are: WAIL, YELP, STINGER and HI-LO. As well as an electronic Air Horn sound and Manual sound

Inter Clear: When activated, the Inter Clear feature will cycle through the standard siren tones (Wail, Yelp, Stinger) maintaining each tone for a couple of seconds.

Head Light Defeat: This feature allows the DRL (Daytime running lights) to be disabled.

Beep Alert: System function alert. A standard feature alerting the user that a system function is active.

Flash Mode Select: Different flash modes can be selected for the system by, refer to the programming section.

Adjustable Backlighting: Activated by the ignition, the touchpad buttons have backlight LED's to light every button. The backlight brightness is adjusted by holding SDBY.

The effectiveness of this system is highly dependent upon its proper installation. Please read and follow ALL instructions provided in this manual before attempting the installation.

4.0 INSTALLATION

4.1 SAFETY AND GENERAL CONSIDERATIONS FOR INSTALLERS

WARNING

Your life and the lives of others depend on the safe installation and servicing of D&R products. It is important that you read and follow all instructions provided with the products. In addition, you will find below other important safety instructions and precautions you should read and follow.

Installer Qualifications

For proper installation of this product: you must have a good understanding of automotive electrical systems and procedures, as well as proficiency in installation and servicing of emergency vehicle sound, lighting and warning equipment. We recommend this equipment be installed by qualified personnel.

Sound Hazards

Your hearing and that of others, in or near your emergency vehicle could be affected by the loud sounds generated. Damage could result because of short-term exposure to moderately loud sounds. Each jurisdiction (country, province/state, etc.) can have specific recommendations governing exposure to sound. Your employer is one source to obtain information regarding this subject.

During Installation

DO NOT connect this system to vehicle battery until ALL other electrical connections have been **COMPLETED**, and you have checked that no short exists.

If using non-D&R Electronics components, such as speaker(s) or siren amplifier, be sure that they have compatible wattage ratings.

A two-speaker installation requires that they be wired in phase and located next each other.
All speakers should be installed in a location that will produce minimum sound levels inside the vehicle, while maximizing the signaling effectiveness outside the
vehicle. Objects in front of the speaker(s) can severely reduce the sound output. To maximize sound output, ensure that there are no obstructions in front of the speaker(s). Locate the control unit so that the vehicle, controls and microphone can be operated safely.
High current conductors (wiring) short-circuiting to the vehicle frame can cause sparks which could result in electrical fires or flying molten metal.

DO NOT route wiring or install any equipment in the deployment path of an air bag.

NOTE: A proper ground connection between the system and the vehicle chassis ground must be made in order for the system to function properly. This requires the use of a crimped or soldered ring termination on the negative wire connecting to the chassis. Also it is important to ensure that there is a clean metal to metal contact between the vehicle chassis and the ring termination it is necessary to remove the paint down to bare metal using sandpaper or any other abrasive tool. If a reliable chassis ground connection back to the battery can not be made then it will be necessary to run a discrete wire directly to the negative battery terminal, the minimum gauge of this wire must be the same as the power feed wire connected to the battery terminal.

After installation

WARNING !

Failure to observe and follow all safety precautions and instructions may result in property damage, serious injury , or death to you or others.

WARNING !

Manufacturer's recommendations of wire size and tight connections will provide a longer operation life for your equipment. Route wiring using grommets and sealant when passing through compartment walls Looms, grommets, cable ties and similar installation hardware should be used to anchor and protect wiring and devices. Particular attention should be paid to the location and method of electrical connection and splices to protect these points from corrosion and loss of conductivity. Ground termination should ONLY be made to substantial chassis components; preferably the battery.
A circuit breaker or fuse **MUST** be installed in the supply line for protection against short circuits; preferably one with 60 to 80Amp rating. Follow specific instructions in the following section.
DO NOT attempt to operate or test the system before ensuring a **SECURE GROUND AND POWER CONNECTION USING A DEDICATED SET OF WIRES FROM THE BATTERY TO THE SYSTEM**.

Test the completely installed system to ensure that it is operating properly.
Test normal vehicle functions, including horn and light systems to ensure that they operate as in a normal vehicle.
These instructions should be kept in a safe place and referred to when servicing and/or reinstalling the product.

4.2 MOUNTING

The lightweight control head is remote, so it can be located on the dash, in a console or with an optional over the radio swing bracket. Ensure that the unit is not mounted in any location where excessive moisture may contact it.
Other configurations may be possible utilizing custom brackets. Please check with D&R Electronics to ensure that no problems exist utilizing any non-standard, non-D&R Electronics component. The actual unit is mounted in the console after other tasks, such as cable routing, etc., is completed. See Electrical Installation Section for more details.

4.2.1 Mounting Brackets

Depending on the model purchased, brackets may be supplied with the unit. Mounting brackets provide a means for securely attaching the equipment to the vehicle.
If the main unit of the remote INTIMIDATOR is to be installed in the trunk (or other location), use the bracket as a template for drilling any holes into the vehicle frame or body. Be sure to follow all the precautions provided earlier in this document. Use the self-tapping screws to secure the bracket to the vehicle and the machine screws to secure the main unit to the brackets.

Proper gauge wires and an in-line fuse (or circuit breaker) **MUST** be used to ensure safe operation of all equipment.

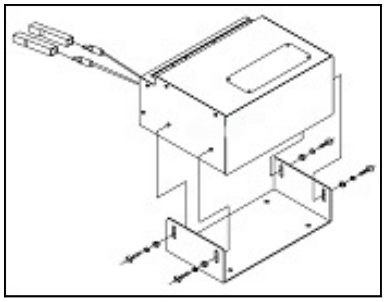


Figure 1: Remote INTIMIDATOR trunk mounting bracket.

4.3 INPUT POWER CABLE CONNECTIONS

Each INTIMIDATOR is normally supplied with power leads equipped with plugs; red and black. Cable from the power source, i.e. battery, is not normally supplied with the unit. User installed cabling must be of the appropriate gauge to ensure that wires do not overheat. Installation of a 30 – 60 amp breaker is recommended on the power lead (BLUE). This should be located in the engine compartment close to the battery. It is recommended that all cabling in the engine compartment, near rotating equipment, located under interior carpeting, etc. be loomed to prevent abrasion of the wire insulating jacket. It is also recommended that any exterior wire connections, e.g. in the engine compartment be soldered to ensure proper electrical contact.

4.4 ELECTRICAL CONNECTIONS

This section covers some of the items in the multi-wiring diagram (see Appendix C) supplied with each Intimidator. Both the diagram and this section provides sufficient details to allow an experienced/qualified automotive electrical systems person to properly install a INTIMIDATOR system.

NOTES:

1) Install the supplied terminal strip plugs into the pin sockets of the intimidator connection strips. These terminal strips are keyed and should not be forced to fit incorrectly.
2) Plan all cable routing and lengths with care. Ensure that sufficient cable is left on each end to allow for cable slack. This allows for easy removal of components for maintenance and repair.
3) **DO NOT** connect power to the INTIMIDATOR, until the wiring layout and connections have been verified and checked for possible shorts. See below for cable routing for D&R equipment on a typical vehicle.
4) Cable routing can be an important factor in radio transmission interference. Radio signal cabling and power cabling should be kept separate if possible.
5) If a cable harness is used, ensure that the harness is handled with care during installation to prevent any damage to the individuals wires within the harness.

4.4.1 OUPUTS 1, 2, and 3 (LIGHT BAR ASSEMBLY)

Outputs 1,2, and 3 are configured to control a light bar Assembly. The light bar assembly should be installed as per installation instructions supplied with it.
Ensure that you read and follow all instructions. Pay particular attention to provide correct cable lengths needed to connect the required light bar components to the control system. It is recommended that a fuse or breaker be installed on the lead (red wire) supplying power to the light bar.

DO NOT connect the light bar (or any other component) to its power source until all wiring connections are made and verified. All connections from the light bar to the INTIMIDATOR controller should be made and verified according to the supplied installation manual.

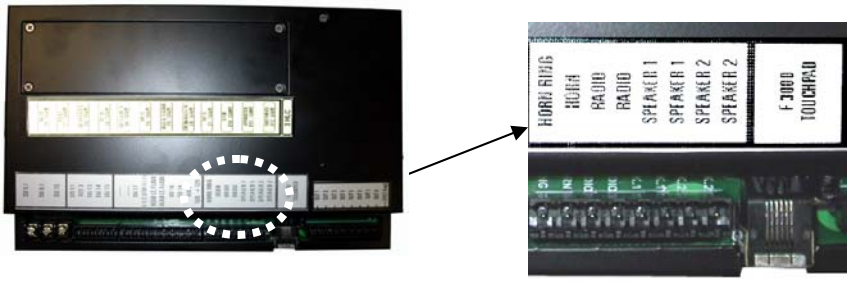


Figure 2: Speaker & Radio Connections.

4.4.2 Speakers

The INTIMIDATOR is designed to operate with one 11-ohm impedance speaker or two 11-ohm impedance speakers connected in parallel and in phase.

NOTE: Speakers are not included as part of the siren control system. D&R supplied speakers are weatherproof and can be installed in any convenient location on the vehicle. Mounting instructions can be found in the speaker carton. Be sure to review any special precautions regarding sound and hearing. Use 18-gauge wire to connect the speaker leads as shown on the multi-wiring diagram. The connections to the back of the main unit are clearly labeled.

4.4.3 Radio

To allow for re-broadcasting incoming radio messages over the PA System speakers, connect to the TWO WAY RADIO's speaker using a suitable 18 AWG zip cord wire and bring this to the INTIMIDATOR inputs labeled RADIO/RADIO. This function is enabled (turned on) from the INTIMIDATOR control panel.

4.4.4 Horn Ring Control

The INTIMIDATOR has the capability of utilizing the vehicle horn ring switch (located on the steering wheel) to activate siren tones and other features of the siren controller. If this feature is desired the following steps must be taken during the installation.

Step1: Locate the wire connecting to the horn. Cut this wire.

Step2: Splice a 14AWG wire to the cut wire coming from the vehicle harness (this is the horn relay side of the wire cut in step1). Insulate the splice with appropriate hardware. Connect this wire to the terminal on the output pin labeled 'HORN RING' on the INTIMIDATOR.

Step3: Splice a 14AWG wire to the remaining end (horn side) of the wire cut in step1. Insulate the splice with appropriate hardware. Connect this wire to the terminal on the output pin labeled 'HORN' on the INTIMIDATOR.

4.4.5 Day Time Running Lights (DRL) (Canada)

Daytime running lights are standard on all model vehicles in Canada. The INTIMIDATOR has the capability of disabling this feature while the vehicle is running. The installer must refer to the manufacturers service manual for the vehicle to determine the correct connection, configuration and control for this feature.

The INTIMIDATOR has the ability to output +12V, GND, or a floating output (see J5 notes in appendix 3), this can be used to defeat the DRL feature of the vehicle.

4.4.6Head Light Flasher (HLF)

Outputs 10 and 11 are used for HLF. Depending on the setup of the INTIMIDATOR (see SETUP AND ADJUSTMENTS) outputs 10 and 11 will flash when activated by the touchpad.

The HLF wiring must be configured according to the vehicle. Use outputs 10 and 11 to control the headlights again refer to the manufacturers service manual to connect this feature.

The he following example is for a Ford Crown Victoria;

4.4.7 Ford Crown Victoria 2006 DRL and HLF

Locate the three (3) pin connector in the front of the vehicle that controls the headlights.

Connect the DRL output from the intimidator to the Head light defeat pin.

The other two pins are left and right HLF inputs. For head light flasher, connect the two pins to the HLF outputs (outputs 10 and 11) on the intimidator.

CAUTION

The vehicle power system or current surges due to switching of inductive loads, may cause malfunctions in the INTIMIDATOR if proper wire and cable routing is not followed. All power (and ground) leads should be kept to the minimum length required. Splices on both of these wires should be avoided. Use of a fusible link or a circuit breaker is highly recommended on the RED power lead.

IMPORTANT

The **INTIMIDATOR** does not come equipped with a separate external ON-OFF switch.
This is the only recommended installation procedure. Any other procedure used to power the INTIMIDATOR could result in a continuous current draw from the battery, when the engine is not operating. This could discharge the vehicle's battery.

4.4.8 Park Kill

Park Kill input is +12VDC or GND activated, and used to immediately disable all siren tones when a vehicle is shifted into park. Connect the P. KILL pin to the vehicle transmission neutral safety switch signal wire.

4.4.9 Connection to Power Source

Power connectors are supplied with the Intimidator, these power clips must be installed on the power cables to facilitate the installing and removal of the INTIMIDATOR. The following instructions are for the preparation of the feed wires and power clips

1. Run a 8 AWG wire lead from the Battery via a fusible link or circuit breaker rated at 80A to the INTIMIDATOR. **NOTE: leave the circuit breaker off or the fuse out until the installation is complete and all the wiring is verified as correct.**
2. Cut the wire to length and slide one of the provided grommets over the wire (Figure 3.)
3. Strip 1/2" length of insulation from the end of the wire, insert the bare wire into the pin connector , crimp or solder.
4. Insert pin and wire into the RED connector housing until it "snaps" into place, pay attention to the orientation of the pin when inserting it into the housing see Figure 3.
5. Slide the grommet down the wire into the plug to seal connection (Figure 4).
6. Repeat the process for the negative (return) wire and the BLACK connector housing

To connect the F3.3000S & F3.3100S simply plug the leads on the INTIMIDATOR into the matching connectors on the wires previously routed and terminated according to the above instructions.
To connect the F3.3050S & F3.3150S (remote unit), route the power cable lead from the battery to the remote unit location (generally the trunk) and terminate the wires with the connectors describe in the above procedure.

TIP: remember to route power cables as far as possible from any radio equipment cabling.

Figure 3

Figure 4

4.5 FINAL INSTALLATION AND INSPECTION

Before powering up the unit, perform any necessary checks for continuity and ground shorts to satisfy yourself that all wiring and connections have been installed correctly. Remedy any deficiencies prior to continuing.

Ensure that all connections are secure. Pay particular attention to any ground connections made to the chassis of the vehicle via ground lugs.
Turn on the CB ON or install the main power wire fuse.

Power on the INTIMIDATOR by starting the vehicle. Verify that each function on the INTIMIDATOR panel performs correctly, by pressing "ON" each switch one at a time and monitoring the expected outcome. It is best to begin with the single function switches first. Use the information in the Operation Section if necessary.
Should any button/feature not function as expected, stop the testing. Turn off the vehicle and check for any faulty wiring connections associated with the button that is not working. After correcting any deficiencies found, restart the vehicle and continue the verification of the INTIMIDATOR Finally, check that the multi-function switches, especially the master/emergency and Standby/PA switch performs correctly.
When all aspects have been verified, you have completed the installation of INTIMIDATOR.

5. SERVICE AND MAINTENANCE

5.1 TROUBLE -SHOOTING

5.1.1 Vehicle related problems

PROBLEM	POSSIBLE CAUSE	PROBABLE SOLUTION
System runs properly but shuts down when rotary or heavy outputs are turned "ON".	Vehicle battery is low on charge.	Recharge vehicle battery.
Function does not operate when it is selected, but corresponding red LED is on.	Fuse is blown.	Disconnect system from vehicle. Open the fuse lid, and check if an internal fuse is blown.
Some functions do not operate properly.	Bad wiring in car.	Ensure proper fuse rating when replacing a fuse and check the car wiring.
Functions work but there is no back-lighting and head light defeat is not working.	No power to "***12V FROM IGN"*** pin exists.	Check 12V-ignition wire for any shorts or improper connections. Check the "12V FROM IGN." pin of 10 Pin Connector for 12 Volts. *J3(3)*
System runs properly but shuts down while running and starts again.	Vehicle circuit breaker not rated properly, and is overheating.	Use circuit breaker with 1.25 times the amperage rating for full load operation.
Some functions blow up the fuses every time.		Ensure proper fuse rating and the car wiring.

5.1.2 Improper Configuration or User Errors

Lights are solid and not flashing.	Programming setup not set to flashing mode.	Refer to ***Set-Up & Adjustments*** section for programming.
Dash lights go "OFF" when head light flashers are used.	System is set up for a Ford, and the vehicle is a GM or GM compatible.	Refer to the ***Set-Up & Adjustments*** section for programming.

5.1.3 Install Errors

There is a burning smell when heavy loads come "ON". Lights are dim and wires are heating up.	Loads are exceeding absolute maximum limits of system.	Ensure proper fuse rating and ensure that loads are not exceeding limit of each output.
Lights dim when another light is turned "ON".	Improper wire gauge being used.	Ensure that proper wire gauge are used for the system's power and ground lines.
Siren's tone changes when another light or heavy load comes "ON".	The electronics may not be operating properly.	Also, ensure that all screws of terminal blocks are tight.
While using the two-way radio, lights come "ON", or function(s) is/are unstable.	Loose or poor ground connection, or improper power wiring.	Use dedicated power and ground wires from battery to system. Dedicate separate power and ground wires to the radio.
The system is emitting a buzzing sound and/or some functions are not operating properly.	Improper or poor wiring. Vehicle battery charge is low.	Ensure that all power and ground wiring connections are firmly secured. Ensure that all plugs are plugged in firmly and all screws on the terminal blocks are tight. Recharge vehicle battery.
Daytime Running Lights are not coming "ON"	Parking brake is engaged. Improper Daytime Running Light wiring.	Release parking brake fully. Ensure proper wiring for Daytime Running Light System.
Siren continues to operate for a few seconds after horn ring is released.	Hit-n-go feature is engaged; normal operation.	
Siren tone does not operate when it is selected, but corresponding red LED light does come "ON".	Possible microphone line problem (microphone signal overrides all siren tones).	Ensure secure connection of microphone and its extension cable Try another microphone.
When powering the siren on standby mode, the siren goes "ON".	Horn and Horn Ring wires are reversed.	Reverse the Horn and Horn Ring wires.
Functions work but there is no sound output.	Poor speaker connection. Blown speaker.	Ensure secure connection of speaker wires. Check and replace speaker if necessary.
All LED's are "ON" but no functions will operate.	System is locked up (due to a power surge on battery boost).	Disconnect power to unit then reconnect.

5.2 EXTRA TROUBLE - SHOOTING TIPS FOR GM SUBURBAN & COMPATIBLE VEHICLES

PROBLEM	POSSIBLE CAUSE	PROBABLE SOLUTION
Head light flasher flashes only one light.	System has not been configured for GM Suburban & Compatible vehicles.	Call Technical Support at D&R Electronics.
One low beam light is not working.	Same as above. Low beam terminal is not connected to the system.	Call Technical Support at D&R Electronics.
Relay board is emitting a buzzing sound.	Improper or poor wiring of Daytime Running Light system. Vehicle battery charge is low.	Ensure proper connection for DRL system; refer to wiring diagram of Suburban DRL Turn on engine to recharge vehicle battery.

.5.3 REMOVAL OF UNIT

Removal of the INTIMIDATOR system from the vehicle is accomplished by first disconnecting the system from its power source. Be sure the vehicle ignition is turned off. Disconnect the ***BLUE*** and ***BLACK*** plugs from the back of the INTIMIDATOR main unit. For console mounted systems, unscrew the faceplate screws securing it to the console. Carefully pull the unit from the console until the power and ground plugs are exposed. Disconnect both plugs.

5.4 FUSE REPLACEMENT

Fuse replacement is not necessary, the relay board contains solid state switches with built in protection.

5.5 VEHICLE BOOSTING

Boosting the vehicle battery using another vehicle or certain types of chargers may cause voltage spikes in the vehicle electrical system. These spikes can cause your INTIMIDATOR to malfunction, and/or lose any user programming done after installation. The recommended procedure for boosting the vehicle is shown below.

Step1: Disconnect the INTIMIDATOR from its power source. This can be done inside the engine compartment at the battery or at the circuit breaker (if installation recommendations were followed). If both of these connection points are unavailable for some reason. The BLUE power plugs at the actual INTIMIDATOR main unit can be disconnected.
Step2: Boost the vehicle as recommended in your vehicle owner's manual.
Step 3: After removing the booster cable connections and the vehicle has been turned off, reconnect the power to the INTIMIDATOR at the point of disconnection in step 1 above.

WARNING: Failure to follow these precautions can damage your unit or cause it to operate in an erratic manner.

6. SETUP & ADJUSTMENTS

The figure 5 shows the numbering of the switches, this information is needed for programming the intimidator touchpad.

WARNING !

ALL INTIMIDATOR FRONT PANEL SWITCHES ARE FACTORY PRE-CONFIGURED.

1) This configuration is what is shown on the label. Therefore, all connections to the INTIMIDATOR must correspond to the label.
2) Any Changes to the default configuration are not permanent and could be erased as a result of electrical problems, ie. if some of the switch functions are reprogrammed and saved they can be lost, and must be reprogrammed.
3) Any changes to the INTIMIDATOR configuration requires wiring the corresponding outputs correctly. THIS SHOULD BE LEFT TO QUALIFIED PERSONNEL ONLY.

6.1 VOLUME ADJUSTMENT

Depending on the particular vehicle and radio (or other) equipment installed, it may be necessary to adjust the microphone and radio volume controls located on the side of the INTIMIDATOR main unit. Turn the adjustment screws clockwise to increase the volume and counter-clockwise to decrease it.

6.2 TOUCHPAD BACKLIGHT BRIGHTNESS

The brightness of the touch pad backlight can be adjusted by pressing and holding the "STBY/PA " switch. This is switch 1 (SW1) in most cases. Hold until the desired brightness is seen. When the button is released the current brightness is saved. The backlight can only be adjusted when Ignition is "ON". The "STBY/PA " switch is indicated in the supplied product template drawing.

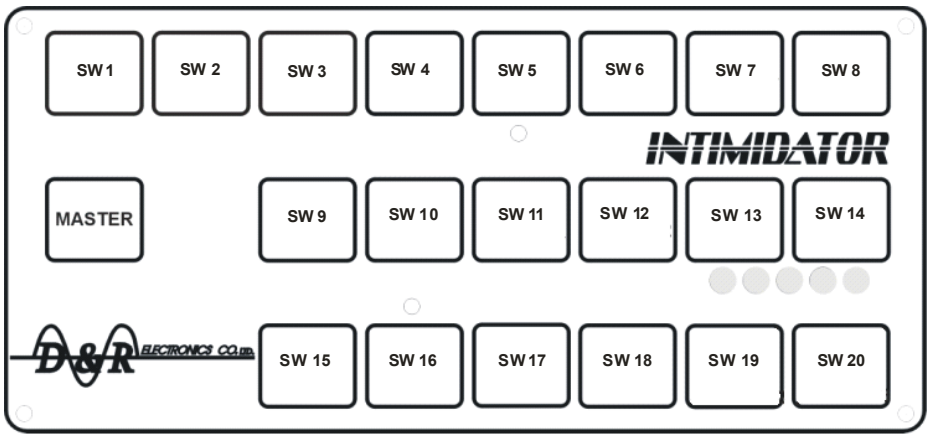


Figure 5 Switch Layout

6.3 PROGRAMMING STEPS

To program and re-assign some of the control signals and functions, follow the directions in this section.

6.3.1 RESETTING FACTORY DEFAULTS

The *Intimidator* siren and light control system is delivered with a factory set default . The unit may be reset to the factory settings as follows:

1. Disconnect the remote controller from the control unit
2. Depress and hold down the STBY/PA (SW1) button as you reconnect
3. The controller will sound an audible beep to indicate the system has been reset

6.3.2 SW2 PROGRAMMING

For Inter Clear functions or Radio Re-broadcasting functions.
Press and hold SW13 / SW14 / SW18 for 2 seconds to enter this programming mode.
SW18 will flash while in this programming mode.
SW 3 to be OFF for Radio re-broadcasting mode.
SW3 to be ON for Inter Clear mode.
Save this configuration by pressing STBY/PA (SW1)

6.3.3 SETTING THE FUNCTIONS

There are two setup tables, each with 8 switches used to configure the desired settings. The programming is done by entering one of 2 programming modes, setting the desired touchpad switches (SW1 to SW8), "OFF" or "ON", and finally saving that configuration.

6.3.4 FUNCTION PROGRAMMING STEPS

1. Enter the desired programming mode by holding down:
   -SW1. SW13 and SW14 to access Setup Table 1
   -SW2, SW13 and SW14 to access Setup Table 2
   After holding for a few seconds, there will be 2 beeps to indicate that you have entered the setup mode.
2. Refer to the Setup table 1 and Setup table 2 to configure the functions of the touchpad.
3. Set switches 1 through 8 ("OFF" or "ON") to match the desired setting for each function indicated in the programming tables.

Hold down SW1 to save the new setup configuration. A long beep will sound to indicate the configuration has been saved and you are no longer in setup mode.

The following Tables and explanations refer to the functions of the switches and programming modes.

SETUP (TABLE 1) - ACCESSED BY HOLDING DOWN SW1, SW13 AND SW14

SW	OFF	ON	OUTPUT
1	SINGLE FLASH (HL)	DOUBLE FLASH (HL)	10 & 11
2	ALLEYS FLASH W/MASTER	ALLEYS SOLID W/MASTER	6 & 7
3	HEAD LIGHT FLASH	HEAD LIGHT SOLID	10 & 11
4	D.R.L. WITH H.L.F.	NO D.R.L. WITH H.L.F.	N/A
5	D.R.L. FUNCTION	D.R.L. OUTPUT	N/A
6	AIR HORN ON STBY	WAIL ON STBY	External
7	BEEP ALERT	NO BEEP ALERT	N/A
8	PARK KILL DISABLED	PARK KILL ENABLED	N/A

(FOR MOST FORD/FOR MOST GM)

SETUP (TABLE 2) - ACCESSED BY HOLDING DOWN SW2, SW13 AND SW14

SW	OFF	ON	OUTPUT
1	DO NOT CHANGE *		N/A
2	STANDARD ARROWSTICK *	911 STYLE ARROWSTICK	AS
3	ARROWSTICK ENABLED	ARROWSTICK DISABLED	AS
4	AUX 1 ACTIVE W/O IGN	AUX 1 ACTIVE W/IGN	13
5	AUX 1 SOLID	AUX 1 MOMENTARY	13
6	SGUN ACTIVE W/O IGN	SGUN ACTIVE W/IGN	12
7	SEE OUTPUT 12 TABLE		12
8	SEE OUTPUT 12 TABLE		12

OUTPUT 1 & 2 (TABLE 3) - SW7 & SW8

SETTING	SW 7	SW 8	OUTPUT 12 (SG) FUNCTION
1	OFF	OFF	OUTPUT 12 SOLID
2	OFF	ON	SG 20 SEC TIMER
3	ON	OFF	SG MOMENTARY
4	ON	ON	SG 9 SEC TIMER

Setup (Table 1) Functions
Note: The following functions depend on wiring configuration.

SW 1

ON Double Flash - headlight flasher (outputs 10 & 11) will alternate every 2 flashes

OFF Single Flash - headlight flasher (outputs 10 & 11) will alternate every flash

SW 2

ON Alley Solid w/Master - When MASTER is "ON" and alley lights (output 6 or 7) are "ON", alley lights (outputs 6 & 7) will burn solid

OFF Alley Flash w/Master - When MASTER is "ON" and alley lights (outputs 6 or 7) are "ON", alley lights will flash

SW 3

ON Head Lights Solid - Head lights (outputs 10 & 11) will burn solid when activated by touchpad

OFF Head Lights Flash - Head lights (outputs 10 & 11) will flash when activated by touchpad

SW 6

ON Wail on STBY - When in Standby mode, horn will sound wail

OFF Air Horn on STBY - When in Standby mode, horn will sound air horn

SW 7

ON No Beep Alert - Beep alert disabled

OFF Beep Alert - When at least one light switch is "ON" the touchpad will beep every 3 minutes to remind the user that functions are activated. The siren switches do not have beep alert function.

Setup (Table 2) Functions

SW 2

ON 911 system - in this mode the Intimidator uses OUT14 and OUT5 for traffic director control. Using SW19 the following functions can be activated: LEFT ARROW (OUT14), RIGHT ARROW (OUT 5), CENTER OUT (OUT14 & OUT15). In this setup SW20 is inactive.

OFF Standard Arrowstick (CODE 3) - standard ground controlled traffic directors (up to 8 outputs). Using SW19 the following patterns can be activated: LEFT ARROW, RIGHT ARROW, CENTER OUT Using SW20 the following patterns can be activated: CENTER FLASH, ALTERNATE LEFT-RIGHT, RANDOM FLASH.

SW 3

ON Arrowstick Disabled - SW 19 & SW 20 will activate AUX 2 and AUX 3 (outputs 14 & 5) respectively (arrowstick will not work)

OFF Arrowstick Enabled - must be enabled for arrowstick option to work

SW 4

ON AUX 1 Active w/ Ignition - AUX 1(output 13) cannot be activated until ignition is "ON"

OFF AUX 1 Active w/o Ignition - AUX 1 can be activated when ignition is "OFF"

SW 5

ON AUX 1 Momentary - AUX 1 (output 13) is activated only while corresponding button is pressed, and deactivated when button is released

OFF AUX 1 Solid - AUX 1 is activated when corresponding button is pressed and remains activated until button is pressed a second time

SW 6

ON SGUN Active w/ Ignition-Shot gun (output 12) cannot be activated unless ignition is "ON"

OFF SGUN Active w/o Ignition - Shot gun can be activated when ignition is "OFF"

SW7 & SW8 (See Output 1&2 (Table 3))

O/P 12 Solid	SGUN (output 12) is activated when corresponding button is pressed and remains activated until button is pressed a second time
SG 20 Sec Timer	SGUN is activated for 20 seconds after corresponding button is pressed
SG Momentary	SGUN is activated only while corresponding button is pressed and deactivated when button is released
SG 9 Sec Timer	SGUN is activated for 9 seconds after corresponding button is pressed

6.4 MASTER SWITCH PROGRAMMING
INTIMIDATOR F3.3000S/F3.3050S

Once programmed the MASTER switch will activate the functions whenever the switch is pressed. The *Intimidator* will not allow non-compatible functions to be activated (i.e. you can only program one siren function to be activated). To program the MASTER switch proceed as follows:

1. Ensure the remote controller is connected to the master control unit
2. Simultaneously depress the program activation buttons (buttons 13 (RIGHT ALLEY) & 14(LEFT ALLEY)) and button 9 (the MASTER switch position selection button).
3. The *Intimidator* will respond with two audible beeps indicating it is in programming mode
4. The lights will be lit on the control buttons currently programmed to activate with this switch position.
5. To add/delete a function depress the desired control button.
6. When selection is complete store settings by depressing and holding the STBY/PA (SW 1) button
7. The *Intimidator* will respond with a long audible beep

NOTES: - for systems with arrowstick (F3.3050S/F3.3150S), the arrowstick switch cannot be set to follow the MASTER function. Also if SW 16 and/or SW 18 are set to be momentary, they cannot be set to follow the MASTER function.

6.5 SLIDE SWITCH PROGRAMMING
INTIMIDATOR w/ Slide Switch (F3.3100S/F3.3150S)

Once programmed the slide switch will activate the functions whenever the switch is moved to that position. The *Intimidator* will not allow non-compatible functions to be activated (i.e. you can only program one siren function to be activated). To program the slide switch proceed as follows:

1. Ensure the remote controller is connected to the master control unit
2. Position the slide switch in the "OFF" position
3. Simultaneously depress the program activation buttons (buttons 13 (LEFT ALLEY) & 14 (RIGHT ALLEY)) and the switch position selection button for the slide switch position you wish to program (button 10 (REAR FLASHER) or 11 (FRONT FLASHER) or 12 (HEAD LT FLASHER)) see Table 4 below.
4. The *Intimidator* will respond with two audible beeps indicating it is in programming mode and the LED indicator for that switch position will light.
5. The lights will be lit on the control buttons currently programmed to activate with this switch position.
6. To add/delete a function depress the desired control button.
7. When selection is complete store settings by depressing and holding the STBY/PA (SW1) button
8. The *Intimidator* will respond with a long audible beep
9. Check each of the configurations for proper indication and functional output.

Program Control buttons		
Function	Press Buttons[1,2]	Slide Switch
Program Switch Position 1	10,13,14	Off
Program Switch Position 2	11,13,14	Off
Program Switch position 3	12,13,14	Off

Table 4

[1] Refer to Figure 6&7
[2] Must be depressed simultaneously

6.6 INTIMIDATOR STANDARD TRAFFIC DIRECTOR CONFIGURATION

The CODE 3 style traffic director configuration is setup using the touchpad's top row switches, SW1 to SW8. Choose from the table below the configuration to be used and turn ON or OFF SW1 to SW8 to match the desired configuration.

To enter this programming mode press and hold SW13, 14 and 15.

The available traffic director configurations are as shown in the following Table 5.
Press and hold SW1 to save the new configuration.

CONFIGURATION	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
NOT USED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
8 OUTPUT STANDARD	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
8 OUTPUT STANDARD W/TIPS	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
NOT USED	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
6 OUTPUT STANDARD	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
6 OUTPUT STANDARD W/TIPS	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
6 OUTPUT REVERSED	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
6 OUTPUT RESERVED W/TIPS	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
5 OUTPUT STANDARD	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
5 OUTPUT STADARD W/TIPS	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
4 OUTPUT STANDARD	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF

6.7 INTIMIDATOR OUT 1 & OUT 2 CONFIGURATION

OUT1/OUT2 is also configured using the touchpad's top row switches SW1&SW2 Choose from the table below the configuration to be used and turn ON or OFF SW2 to match the desired configuration.

CONFIGURATION	SW1	SW2
SW9:OUT 1 & OUT 2 SW10: OUT 3 SW11: OUT 4	OFF	OFF
SW9: OUT 1 SW10: OUT 2 SW11: OUT 3	OFF	ON

To enter the programming mode for this configuration press and hold SW13, 14 and 18, and wait for the double beep to confirm that the unit is in programming mode.

Set the switches and press and hold STBY/PA (SW1) to save the new configuration.

6.8 INTIMIDATOR OUT 4 CONFIGURATION

The INTIMIDATOR system provides an auxiliary output (OUT 4) which can be configured to be activated by the MASTER switch or by the Slide Switch position 1, 2 and 3.
The factory default has set OUT 4 to be active with MASTER switch or with Slide Switch position 3.
To enter in programming mode for this configuration press and hold SW13, 14 and 18 until a double beep confirms that the unit is in programming mode.
Set the switches following the table below:

CONFIGURATION	SW1	SW2	SW5	SW6	SW7	SW8
OUT 4 w/ MASTER	OFF	ON	ON	OFF	OFF	OFF
OUT 4 w/ Slide Switch 1	OFF	ON	OFF	ON	OFF	OFF
OUT 4 w/ Slide Switch 2	OFF	ON	OFF	OFF	ON	OFF
OUT 4 w/ Slide Switch 3	OFF	ON	OFF	OFF	OFF	ON

There are no constrains in activating OUT 4 with the Slide Switch, it can be activated by any combination of the 3 Slide Switch positions.
To save the new combination press and hold STBY/PS (SW1).

7. OPERATION

7.1 END-USER SAFETY INFORMATION

After installation, configuration and testing, the unit is ready for use. It is important that the end-user be familiar with the various functions available on the INTIMIDATOR. It is imperative that the end-user know exactly how their particular unit has been configured, and how they can access these functions from the front panel.

The light flashing pattern is usually defined by the jurisdiction in which the emergency vehicle is used and will already be pre-set by the factory.

As noted previously the "MASTER EMERG." button can be programmed to perform a sequenced activation of any of the light control functions, as well as placing the siren in standby mode. The INTIMIDATOR has been pre-programmed to perform the functions as detailed in this manual.

As the end-user, DO NOT attempt to service the unit. It is very important that the end-user refer any technical or operational problems found with their in-vehicle unit to qualified personnel. Service and maintenance performed by unqualified personnel could result in damage to your unit and void the warranty.

The public address system, P.A., will override all other functions (i.e. siren, etc.) when accessed using the microphone. The switch LED is lit when a function is active. The following describes what happens when using the buttons on a generic INTIMIDATOR touchpad.

7.2 OPERATING INSTRUCTIONS

The main functions of the INTIMIDATOR control panel are briefly mentioned in this section, the purpose of the additional detail is to facilitate use by the operator. The front panel (or remote head) layout for this unit is shown as Figure 6 & 7. The unit has 16 pushbutton switches (identified 1-16, left to right, top to bottom (see figure 5)). Their function is noted on the label directly above each switch. NOTE the information that follows is specific to a generic (i.e. standard) INTIMIDATOR, and may not reflect what your unit looks like. The most important feature of the INTIMIDATOR is the master emergency function (MASTER EMERG.). It provides single button activation of the most important functions normally accessed via the panel. It also provides other functionality by placing the unit in standby. The various siren tones and air horn can be activated using the vehicle horn ring switch (HORN) on the steering column.

1) The MASTER EMERG. switch activates the left and right alley, the rotary lights (light bar) and/or the HEAD LIGHT FLASHER depending on the configuration setting
   See Chapter 6.1: Programming Steps.
2) The ROTARY switch (if equipped) activates the rotary light system on the light bar.
3) The REAR FLASHER switch will turn on the rear flasher and/or rear strobes on the light bar
4) The FRONT FLASHER switch will turn on the front flasher and/or front strobes on the light bar.

The Flasher switches only serve to turn the function ON or OFF, the actual flash patterns are preset and configured as part of the light bar manufacturing/installation process (consult the individual manuals for the connected equipment).

5) The HEAD LT. FLASHER switch activates the head light flashers. This switch flashes the vehicle hi-beam headlights. The vehicle own hi-beam switch will function normally if activated, thus interrupting the flash pattern.
6) The TAKE DOWN switch activates the take down function of the light bar.

7) The LEFT ALLEY switch activates the left alley light.

8) The RIGHT ALLEY switch activates the right alley light.

9) The STBY/PA switch is a dual function switch. The unit is in siren mode (i.e. standby) when the switch is on (LED lit). Pressing on the vehicle horn will produce one siren cycle. Each successive press will cycle to the next siren tone. Cycling is from WAIL to YELP to STINGER. Pressing the vehicle horn switch for longer than 2 seconds will activate the air horn. The air horn will continue until the vehicle horn switch is released. When the STBY/PA switch is off the unit PA functions are active.

10) The RADIO switch will activate the re-broadcasting of the radio reception though the PA system.

11) The other siren switches function in the same manner. If the STBY/PA switch is off (i.e. PA. is active) and a siren tone is active, pressing the vehicle horn switch will cycle to the next siren tone. Cycling is from yelp to stinger. By pressing the vehicle horn ring switch for longer than two seconds, the unit will activate the air horn.

12) The CONTROL switch will unlock the cabinet of the shot gun.

13) The HEAD LT. DEFEAT switch allows the daytime running lights (DRL) to be turned off. A single press of the switch will disable the Daytime Running Lights of the vehicle.

Figure 6, F3.3000S Control Panel Switch Layout

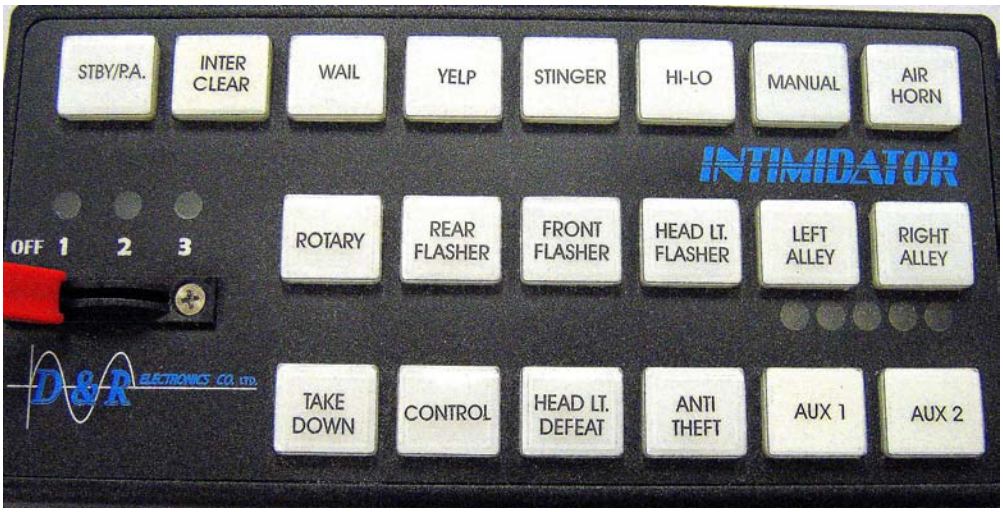


Figure 7, F3.3100S Control Panel Switch Layout

APPENDIX A: SPECIFICATIONS

A. GENERAL

Input Voltage…… 11 to 16 Volts DC
Operation Temperature Ranges…… -30 °C to +65 °C

Standby Current…… 0.05 ± 10%

	F3.3000S	F3.3000(without touchpad)
Weight…….	10 lbs	9 lbs
Physical Dimensions		
Height……..	3.875”	3.875”
Width……..	9.375”	9.375”
Depth……..	5.875”	5.875”

B. SIREN SPECIFICATION

Operating Current ……... 10Amps
Frequency Range …… 734 to 1311 Hz (nominal)
Cycle rate ……... Wail - 20 cycles/min.
Yelp – 200 cycles/min.
Stinger – 800 cycles/min.
Hi-Lo - 55 cycles/min.
Nominal Voltage Output …… 48 Volts peak to peak (with 11Ω load)
Audio Response …….. 100 – 4,000 Hz ± 3dB
Audio Power ..... 32 Watt
Input Impedance …….. 600Ω (Radio)

C. VOLUME CONTROL

The figure below shows the location of the volume control screw button on the left side of the unit. To increase the volume, turn the screw clockwise.

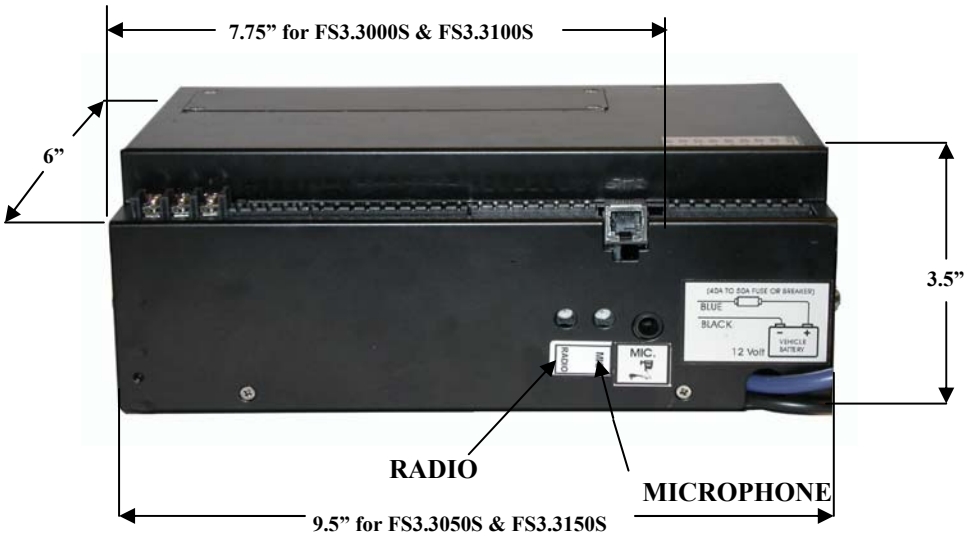


Figure: INTIMIDATOR dimensions and volume controls.

APPENDIX B: PARTS LIST

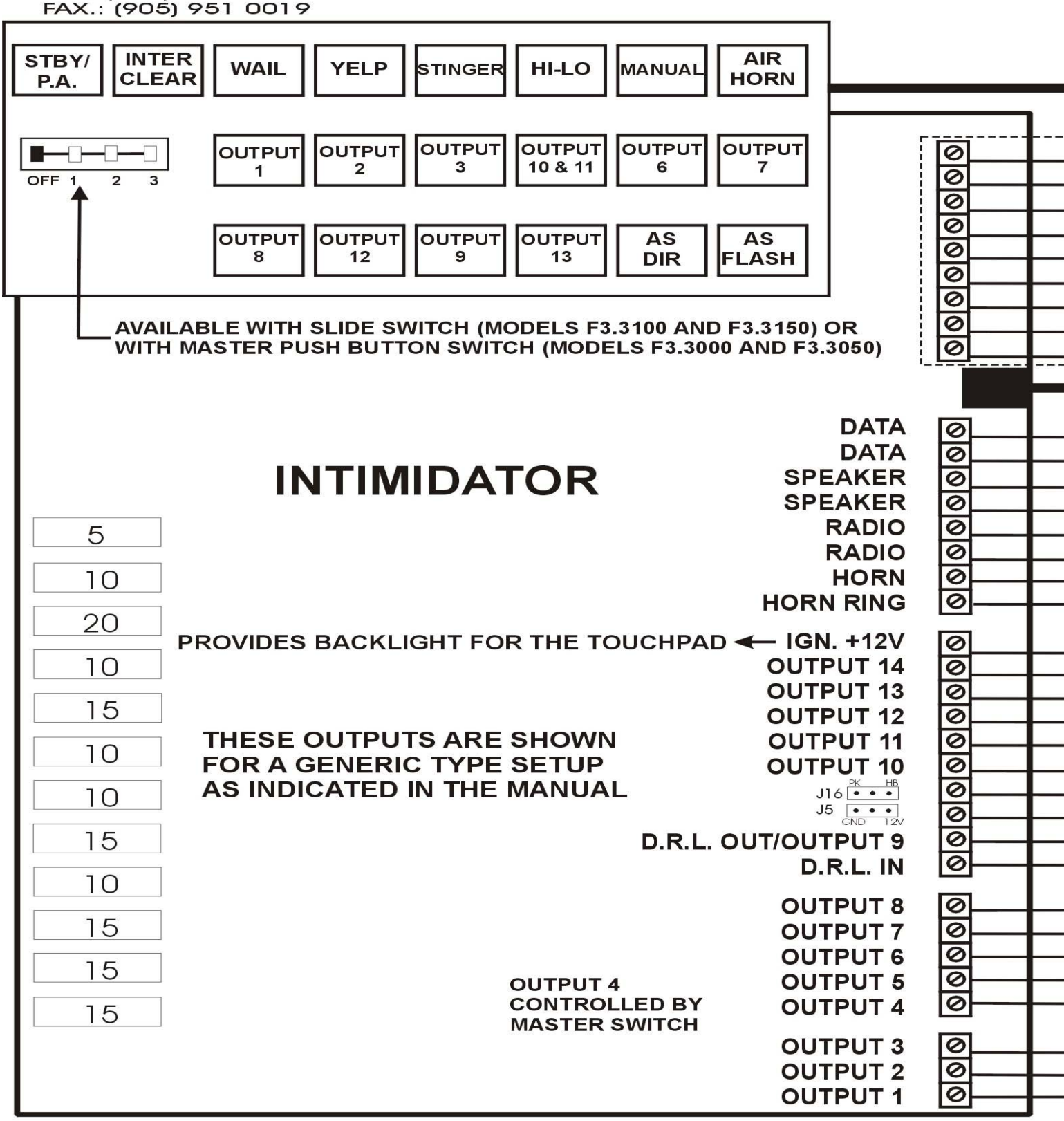
The following replacement parts and accessories are available for the INTIMIDATOR

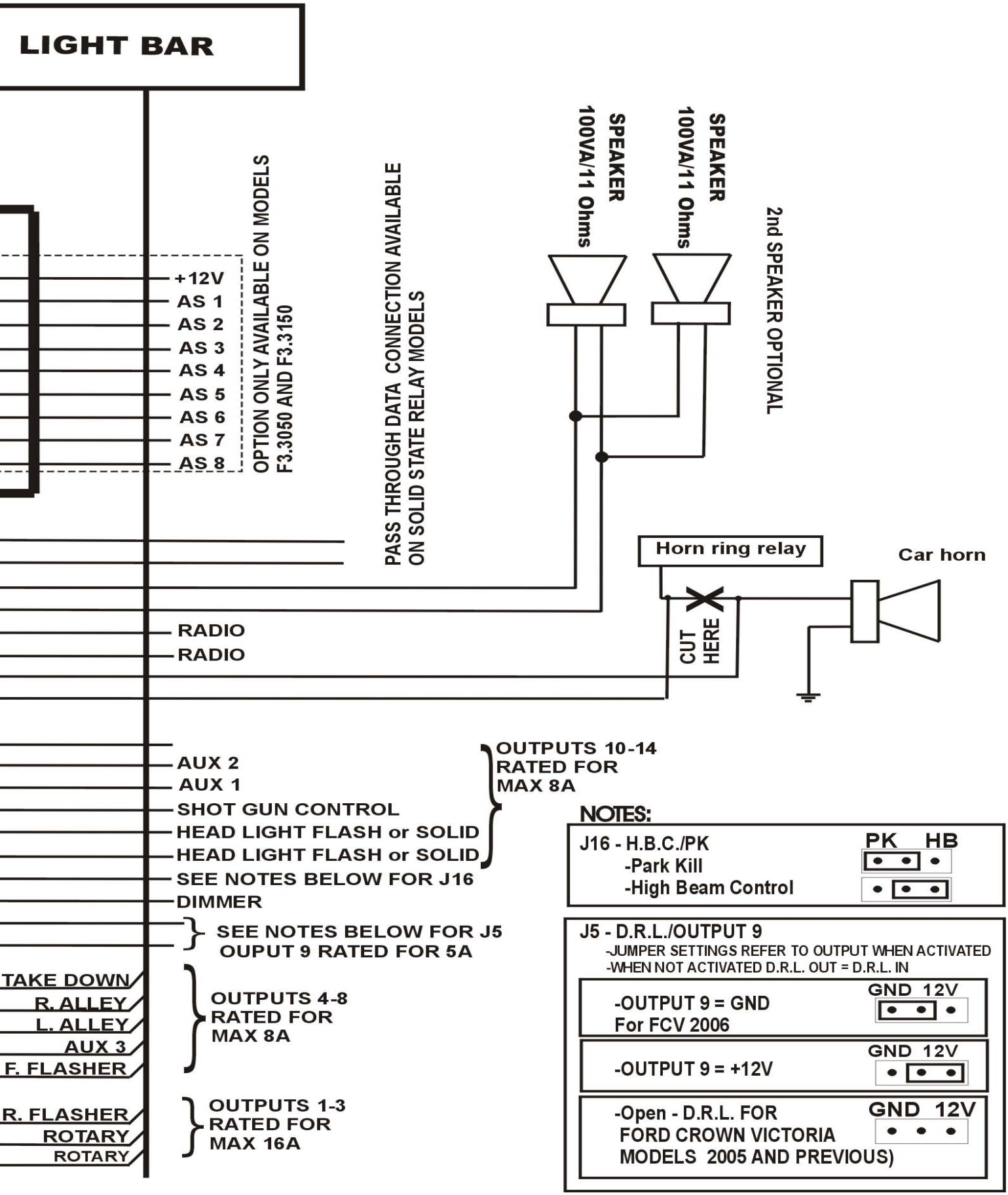
PART NUMBER	QUANTITY	DESCRIPTION	NOTES
PA-MIC	1	MICROPHONE,W/PLUG	
201-0012	1	PLUG HOUSING RED H.D.75 AMP	This is the housing for the +12V wire coming from the battery, it connects to the blue plug on the intimidator.
201-0013	1	PLUG HOUSING BLACK H.D. 75 AMP	
196-0016	2	PLUG 7 pinPIN H.D. 75 AMP	Pins for Power and Ground plugs
CA-0113	1	Console access - Mic clip (heavy duty)	
215-0007	1	HARNESS ASSY. MICROPHONE 18FT.	PA mic extension cable
215-0016	1	HARNESS ASSY. DATA INTIMIDATOR 18 FT.	Touchpad Connecting cable
F3.3000 Or F3.3100	1	TOUCH PAD	Model or part number determined by application.
199C0070	1	PCB F3TPC SMT	Touch pad internal circuit board assembly
199-0003	1	PCB F3R RELAY	Relay board internal circuit board assembly
199-0004	1	PCB F3S SIREN	Siren internal circuit board assembly
212-0022	1	MANUAL FOR INTIMIDATOR F3	This manual

Appendix C - GENERIC MULTI-WIRING DIAGRAM

D&R ELECTRONICS CO. LTD.
8820 GEORGE BOLTON PKWY.
L7E 2Y4 BOLTON, ON
CANADA
TEL.: (905) 951-9997
FAX.: (905) 951 0019

GENERIC MULTI-WIRING DIAGRAM INTIMIDATOR WITH ARROWSTICK AND SLIDE SWITCH




LIGHT BAR
+12V
AS 1
AS 2
AS 3
AS 4
AS 5
AS 6
AS 7
AS 8
OPTION ONLY AVAILABLE ON MODELS F3.3050 AND F3.3150
PASS THROUGH DATA CONNECTION AVAILABLE ON SOLID STATE RELAY MODELS
SPEAKER 100VA/11 Ohms
SPEAKER 100VA/11 Ohms
2nd SPEAKER OPTIONAL
Horn ring relay
Car horn
CUT HERE
RADIO
RADIO
AUX 2
AUX 1
SHOT GUN CONTROL
HEAD LIGHT FLASH or SOLID
HEAD LIGHT FLASH or SOLID
SEE NOTES BELOW FOR J16
DIMMER
OUTPUTS 10-14 RATED FOR MAX 8A
SEE NOTES BELOW FOR J5
OUPUT 9 RATED FOR 5A
TAKE DOWN
R. ALLEY
L. ALLEY
AUX 3
F. FLASHER
OUTPUTS 4-8 RATED FOR MAX 8A
R. FLASHER
ROTARY
ROTARY
OUTPUTS 1-3 RATED FOR MAX 16A
NOTES:
J16 - H.B.C./PK
-Park Kill
-High Beam Control
PK HB
J5 - D.R.L./OUTPUT 9
-JUMPER SETTINGS REFER TO OUTPUT WHEN ACTIVATED
-WHEN NOT ACTIVATED D.R.L. OUT = D.R.L. IN
-OUTPUT 9 = GND
For FCV 2006
GND 12V
-OUTPUT 9 = +12V
GND 12V
-Open - D.R.L. FOR
FORD CROWN VICTORIA
MODELS 2005 AND PREVIOUS)
GND 12V

WARRANTY

D & R Electronics warrants its new products to be free from defects in material and workmanship, under normal use and service for a period of one year on parts replacement.
This warranty applies only to original purchasers acquiring the product directly from D&R Electronics, or its authorized dealers. Warranty will not be recognized without proof of purchase or bill of sale.
This warranty is not transferable.
The warranty begins on the date of delivery to the first user/purchaser.
This warranty shall not apply to products which must be repaired due to normal wear and tear, negligence, improper installation, abuse, misuse, or which have been altered or modified at a facility other than D & R Electronics, or its authorized depot centers.
Units proved to be defective within the warranty period, based on an examination by D&R Electronics, will be replaced or repaired at D & R Electronics' option. This warranty does not cover travel expenses or labor charges for removal or installation.
Lamps, flash tubes, batteries or other items considered consumables are not covered under warranty.
This warranty is in lieu of all other express warranties. D&R Electronics makes no warranties, expressed or implied, other than the express warranties contained herein.

PRODUCT RETURN POLICY

In order to provide you with faster service, product returns for repair or replacement, must have a **Return Goods Authorization Number (RGA number)**. Please contact our company to obtain a RGA number before you return the product to D & R ELECTRONICS. Write the RGA number clearly on the package. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.
D & R ELECTRONICS assumes no responsibility or liability for expenses incurred for the removal and/or the installation of products requiring service and/or repair. Repairing or replacing product is at the discretion of D & R ELECTRONICS.

D&R ELECTRONICS Co. LTD.

CANADA

8820 George Bolton Pkwy.
Bolton, Ontario L7E 2Y4
Tel.: (905)951-9997
Fax: (905)951-0019

USA

2321 Kenmore Avenue
Buffalo, NY, 14207
Toll Free 1-800-538-7338

www.dandrelectronics.com